MEMORANDUM

INTERMOUNTAIN POWER SERVICE CORPORATION

TO: Joe Hamblin

FROM: Dennis Killian

DATE: January 10, 2011

SUBJECT: Update - Environmental Considerations for Dense Pack

Operation

As a follow-up to my memorandum of August 1, 2002 (attached) concerning environmental issues when operating the dense pack modification, I am providing this update to clarify those issues.

Last month IPSC environmental personnel, IPA's Reed Searle, and our counsel met with Utah Division of Air Quality staff and the Utah Assistant Attorney General to resolve questions of interpretation concerning when environmental restrictions apply. As a result, we understand that the State's position is that Unit Two' modifications has caused new limits to kick in.

As of April 1, 2002, the new short term limit for NOx on Unit Two is $0.461~{\rm lb/MBtu}$ on a 30 day rolling average, SO2 is $0.138~{\rm lb/Mbtu}$ on a thirty day rolling average, and PM10 is $0.0184~{\rm lb/MBtu}$ on a three hour instantaneous average. These new limits will also apply to Unit One after the 2003 Spring outage.

Additionally, as of April 1, 2002 the new plant-wide cap was triggered on increased emissions. For SO2 and NOx, that cap is 40 tons or less of emissions increase due to the modifications averaged over any given 12 month period. For PM10, the cap is 15 tons. These caps are annual (rolling 12 month) limits on emissions of both units combined, not individually. The values for each of the preceeding were charted in my earlier memorandum.

In order to assist Operations in meeting the new cap, Engineering Services is developing a new Plant Information screen that shows a NOx and SO2 target emission rate in lb/Mbtu based upon the current production rate. This target is calculated on a per unit basis as well as a combined unit basis, using the cap that needs to be met when accounting for a year's worth of NOx and SO2 emissions. The target rate provides Unit Operators an instantaneous goal to compare against actual current operating conditions.

The purpose in providing this screen is to help steer plant

operation to minimize emissions while increasing production. I cannot over-emphasize the potential impact upon IPSC if our annual emissions for NOx or SO2 exceed 40 tons.

The following chart outlines where we are at as the year is progressing, as well as a projection of how we are lining up to meet the annual emissions cap. The chart also indicates the rate at which a given must be operated to meet the cap at the end of the WEPCO accounting period (3/31/2003).

If you have any questions or comments, please contact myself or Blaine Ipson.

BP/RJC/jg

WEPCO Projections		CONTRACTOR OF THE PROPERTY OF		- PROMO POTENCIA - CONTROL - CONTROL POR CONTROL - CONTR	agen commence of the control of the		THE PROPERTY OF THE PROPERTY O
<u>NOx</u>	<u>SO2</u>	Unit 1	NOx	SO2	Plant	NOx	<u>SO2</u>
13163.0	1931.2	Baseline ¹	13419.5	1855.4	Baseline ¹	26591.5	3787.5
8152.4	1136.2	So Far (tons)	8190.1	1058.8	So Far (tons)	16342.5	2195.0
5010.6	795.1	Yet to go (tons)	5229.4	796.6	Yet to go (tons)	10249.0	1592.5
0.380	0.060	Rate to meet ²	0.483	0.074	Rate to meet ²	0.427	0.066
		Year end at		and the Landscong agency	Year end at		
398.9	-41.2	current rate ³	-636.9	-202.8	current rate ³	-245.0	-248.9
	NOx 13163.0 8152.4 5010.6 0.380	NOx SO2 13163.0 1931.2 8152.4 1136.2 5010.6 795.1 0.380 0.060	NOx SO2 Unit 1 13163.0 1931.2 Baseline¹ 8152.4 1136.2 So Far (tons) 5010.6 795.1 Yet to go (tons) 0.380 0.060 Rate to meet² Year end at Year end at	NOx SO2 Unit 1 NOx 13163.0 1931.2 Baseline 1 13419.5 8152.4 1136.2 So Far (tons) 8190.1 5010.6 795.1 Yet to go (tons) 5229.4 0.380 0.060 Rate to meet 2 0.483 Year end at Year end at 0.483	NOx SO2 Unit 1 NOx SO2 13163.0 1931.2 Baseline¹ 13419.5 1855.4 8152.4 1136.2 So Far (tons) 8190.1 1058.8 5010.6 795.1 Yet to go (tons) 5229.4 796.6 0.380 0.060 Rate to meet² 0.483 0.074 Year end at 2 0.483 0.074	NOx SO2 Unit 1 NOx SO2 Plant 13163.0 1931.2 Baseline¹ 13419.5 1855.4 Baseline¹ 8152.4 1136.2 So Far (tons) 8190.1 1058.8 So Far (tons) 5010.6 795.1 Yet to go (tons) 5229.4 796.6 Yet to go (tons) 0.380 0.060 Rate to meet² 0.483 0.074 Rate to meet² Year end at Year end at Year end at	NOx SO2 Unit 1 NOx SO2 Plant NOx 13163.0 1931.2 Baseline¹ 13419.5 1855.4 Baseline¹ 26591.5 8152.4 1136.2 So Far (tons) 8190.1 1058.8 So Far (tons) 16342.5 5010.6 795.1 Yet to go (tons) 5229.4 796.6 Yet to go (tons) 10249.0 0.380 0.060 Rate to meet² 0.483 0.074 Rate to meet² 0.427 Year end at

(¹Tons per year. ²lb/mmbtu. ³Actual projected tons over WEPCO, but not necessarily unaccounted.)

Assumptions: Same average heat input rates as since 4/1/02 (U2:7729mmbtu/hr; U1:7523mmbtu/hr). Accounts for a 31 day outage on Unit 1, and a 9 day outage on Unit 2. NOTE: To account for outages, Unit 2 rates could be increased by 4% and Unit 1 Rates should be decreased by 13%.

cc: Blaine Ipson
George Cross
Jerry Hintze